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OCCUPATIONAL SAFETY AND HEALTH  
STANDARDS BOARD

February 12, 2007

**Petition for Consideration – Proposed State Standards, Title 8, § 5144, Respiratory Protection, Table 1, Assigned Protection Factors**

Mr. John D. MacLeod, Chairman  
California Occupational Safety and Health Standards Board  
2520 Venture Oaks Way, Suite 350  
Sacramento, California 95833

Fax: 916-274-5743

Dear Mr. MacLeod:

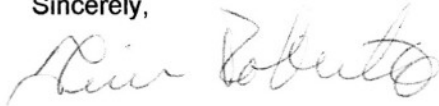
Enclosed please find a Request for Consideration for the portion of the Assigned Protection Factors regarding filtering facepiece respirators in the upcoming hearing to consider adoption of the Federal Assigned Protection Factors Table.

I request these actions be fully considered to ensure the citizens of California are properly protected in the workplace. As is described in the attached petition, there are many reasons not to accept the Federal OSHA revised table, in its entirety, including a pending stay of the filtering facepiece portion of the APF table.

My personal history in respiratory protection includes many years in the waste remediation area, Respirator Program Administrator at Lawrence Livermore National Laboratory, instructor for multiple University of California and Cal/OSHA sites. I have also held membership on both the American Industrial Hygiene Association and American National Standards Institute's respirator committees since the mid 1990's. I was also a member of the Permissible Exposure Limit Advisory Committee.

Thank you for your consideration. If you need any additional information, please do not hesitate to contact me.

Sincerely,



Tim Roberts, MSPH, CIH, CSP  
1106 Glendora Ave.  
Oakland, CA 94602  
(925)423-3981

**BEFORE THE  
STATE OF CALIFORNIA  
DEPARTMENT OF INDUSTRIAL RELATIONS  
AND THE  
CALIFORNIA OCCUPATIONAL SAFETY  
AND HEALTH STANDARDS BOARD**

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In the matter of:

Assigned Protection Factors for Respirators

PROPOSED STATE STANDARDS, TITLE 8  
§ 5144. Respiratory Protection, Table 1, Assigned Protection Factors

CONSTRUCTION SAFETY ORDERS, CHAPTER 4, SUBCHAPTER 4,  
ARTICLE 4, SECTIONS 1529, 1532, 1532.1, AND 1535;  
GENERAL INDUSTRY SAFETY ORDERS, CHAPTER 4, SUBCHAPTER 7,  
ARTICLE 107, SECTION 5144;  
ARTICLE 109, SECTIONS 5190 AND 5198; AND  
ARTICLE 110, SECTIONS 5200, 5202, 5207, 5208,  
5210, 5211, 5212, 5213, 5214, 5217, 5218, AND 5220;  
SHIP BUILDING, SHIP REPAIRING, AND SHIP BREAKING SAFETY ORDERS  
CHAPTER 4, SUBCHAPTER 18, ARTICLE 4, SECTION 8358  
RESPIRATORY PROTECTION

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I, Tim Roberts, CIH, CSP, of Oakland, California, hereby request that the State Of California Department of Industrial Relations through the California Occupational Safety and Health Standards Board assign a respiratory protection assigned protection factor of five or less for filtering facepiece respirators standard that is being considered for Title 8, Section 5144, Table 1, Assigned Protection Factors.

The proposed Assigned Protection Factors Table was published in the January 18, 2007, California Occupation Safety and Health Standard Board notice, *Notice Of Public Meeting/Public Hearing/Business Meeting of the Occupational Safety And Health Standards Board and Notice of Proposed Changes to Title 8 of The California Code of Regulations.*

The information contained below substantiates why the California Occupational Safety and Health Standards Board must rule that a filtering facepiece respirator should have an assigned protection factor (APF) of five or less. Information regarding the proposed assigned protection factor for filtering facepiece respirators includes, but is not limited to:

- 1) It is illogical to state that filtering facepieces protect against workplace particulates with a proposed APF of 10 and invoke the following requirements:
  - a) Not allow filtering facepieces to be used for protection against Asbestos according to (proposed) Title 8, Section 1529, Asbestos, (h) Respiratory protection, (3) Respirator selection, (A).
  - b) Allow filtering facepieces to be used for protection for Cotton dust up to an assigned protection factor up to five (5) per (proposed) Title 8, Section 5190, Cotton Dust, (f) Use of Respirators, (3) Respirator Selection, (A).
- 2) There have been several new Workplace Protection Factor studies published subsequent to the revision of the Federal standard (29 CFR 1910. 134) that could not be considered for that Rulemaking These include:

- a) "Respiratory Protection Provided by N95 Filtering Facepiece Respirators Against Airborne Dust and Microorganisms in Agricultural Farms" Journal of Occupational and Environmental Hygiene, November 2005
- b) "Correlation between Workplace Protection Factors and Fit Factors for Filtering Facepieces in the Welding Environment" Industrial Health, 2002, 40, p328-334

The former study concluded that "...the APF of 10 for N95 filtering facepiece respirators seems inadequate against microorganisms..."

The latter study is included in the Federal OSHA Docket (Ex. H-049C-9-13-2), but was not included in the OSHA statistical analysis. NIOSH evaluation of this study indicated WPFs of 2, 3, and 6 for the three respirator types evaluated. (Reference Docket Ex. H049C 9-13)

- 3) The studies used to support the proposed filtering facepiece APF of 10 are not representative of the total population of filtering facepieces.
  - a) Among 13 studies cited in the OSHA APF preamble for the elastomeric half-mask respirator and filtering facepieces: two were conducted totally by users (Alcan and Duracell (Wallis FF)), one conducted by NIOSH, two conducted by DuPont (Nelson: lead and asbestos). Three National Paints and Coatings Association (NPCA) studies were sponsored by a large respirator manufacturer and DuPont, and five conducted by the same large respirator manufacturer. In other words, the vast majority, 77 percent of WPF studies used by OSHA to support the filtering facepiece proposed APF of 10 were in part or whole supported by one large respirator manufacturer.
  - b) Filtering facepiece respirators have a variety of shapes and designs, such as the formed cup, flat, half fold, and accordion fold, with or without an exhalation valve. Only a small fraction of the formed cup shape respirators have been tested at the workplace. Therefore, there is no information regarding how well the other filtering facepieces models will function in actual workplaces.

- 4) The selection of the test site for the cited APF proposed rule making WPF studies are not representative of the worksite for American worker.
- a) Many test sites chosen for these studies were selected on availability only. Moreover, key study attributes such as hot and humid conditions, long work hours, and heavy workload were the exception, not the norm for most of the cited studies.
  - b) Most test sites had ambient concentrations less than the OSHA half-mask respirator maximum use limit (i.e., ten times the PEL)
- 5) There were no accepted published Workplace Protection Factor Studies for any 42 CFR 84 filtering facepiece and many other 30 CFR 11 filtering facepiece styles. Study data presented at the OSHA APF public hearing by Dr. Jim Johnson, Ph.D., CIH, QEP (Docket 049C, Ex. 16-9-1) showed tremendous variability in the performance of the 42 CFR 84 filtering facepiece respirators.
- a) There are no 42 CFR 84 filtering facepiece included in any published workplace protection study cited in the proposed APF rule.
  - b) Moreover, only the cup shape and one accordion type filtering facepiece were tested in cited studies in the APR proposed rule making. Please note that there are many 30 CFR 11 filtering facepieces that have many different shapes, including cup, folded, accordion, with or without an exhalation valve, or with or without an elastomeric insert.
  - c) There is no assurance that these untested filtering facepieces would provide the same or better protection than those tested.
- 6) A petition to the United States Department of Labor and the Occupational Safety and Health Administration asking for a stay for the filtering facepiece assigned protection factor of 10 pursuant to (Federal Register: August 24, 2006 (Volume 71, Number 164)) [Rules and Regulations][Page 50121-50192] [DOCID:fr24au06-14]) is pending. I am one of three parties asking the Occupational Safety and Health Administration for relief. Until all actions are complete, due process will not have taken place. The petition described the following issues regarding the proposed assigned protection factor for filtering facepieces include but not limited to:

- a) Based on a Freedom of Information request in 2005, no additional information was acquired from the National Institute for Safety and Health (NIOSH) for any and all correspondence to or from NIOSH to OSHA regarding filtering facepieces assigned protection factors.
- b) Failure of OSHA to meet the Data Quality Act requirements and the Department of Labor's Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by the Department of Labor regarding information used by OSHA to reach the conclusion that the filtering facepieces achieve the same APF as the half-mask elastomeric respirators.
- c) No confirmation that communication from the Office of Management and Budget, OSHA, or the Department of Health and Human Services, per United States Code, Title 5, Part I, Chapter 5, Subchapter II, Section 557 (d) has not taken place regarding filtering facepiece assigned protection factors.
- d) Failure of OSHA to consider the Cotton Dust Court's ruling (National Cottonseed Products Association, Petitioner versus William E. Brock, Secretary of Labor, United States Department of Labor ..., Respondents, Nos. 78-2014, 86-1075, and 86-1157, United States Court of Appeals, District of Columbia Circuit, Argued Jan. 16, 1987, Decided Aug. 7, 1987, as amended Aug. 13, 1987) and OSHA's own record that as a class, filtering facepieces do not provide a reliable face fit after initial fit testing. They can not be adequately fit checked each time the same or new respirator is donned and they are more subject to abuse, misuse, and degradation of face fit during actual use and they permit greater faceseal leakage than elastomeric facepiece respirators (per September 5, 1986, letter from Frank A. White, OSHA Deputy Assistant Secretary to Peter G. Nash Esq. of Ogletree, Deakine, Nash, Smoak and Stewart of Washington D.C.).
- e) Failure of OSHA to consider the fact that NIOSH has decided that worker protection factor studies will not be used as a requirement for certifying respirators (Docket H094C, Ex. 16-23-1, page 117).

- f) Use of filtering facepiece respiratory protection has not been proven effective against nanotechnology scale particles. As cited in Docket H049C, Ex. 9-13-2, when small particulates are in the work environment, the Workplace Protection Factor decreases, thus potentially allowing additional exposure to smaller particulates when a filtering facepiece is utilized by the American worker.
- g) In the *OSHA Guidance Update on Protecting Employees from Avian Flu (Avian Influenza) Viruses (OSHA 3323-10N 2006)*, page 19, OSHA states, "... This includes training, fit testing, and user seal checks to ensure appropriate respirator selection and use. To be effective, tight fitting respirators must have a proper sealing surface on the wearer's face." As demonstrated in Post-Hearing Brief, Number 19-6-1, several filtering facepieces had a minimal sealing surface, if at all. Based on the shape of the filtering media, one could suppose that the end user could not perform a user seal check to confirm the effectiveness of the filtering facepiece. In addition, according to ANSI Z88.2-1992, p. 24, item A 6.1 Negative pressure Fit Check and A 6.2 Positive Pressure Fit Check, *This test (i.e., user seal check) may be difficult or impossible to carry out on valveless respirators.* Thus, if a filtering facepiece seal could not be user seal checked, how can OSHA give the recommendation in the "OSHA Guidance Update" and ensure protection of the American worker?

If the petition is not granted, members of the California workforce could be irreparably injured.

Protection of the safety and health of the Californian workforce should be the primary mission of California Occupational Safety and Health Standards Board and approving this petition will achieve this objective.

I look forward to having continued discussions with California Occupational Safety and Health Standards Board.

Respectfully submitted,

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1106 Glendora Ave.  
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(925)423-3981 Days

Dated: February 12, 2007